

RADIAL-HINGE MECHANISM
ABSTRACT OF THE DISCLOSURE

A radial-hinge mechanism includes one or more elongated members arranged and interconnected into a unique, geometry-based, closed-loop assembly often resembling a multi-point star when in its fully-closed mode. The mechanism's signature function is its variable nature of pivoting open from a centralized hinge-core as its substantially circular inner-aperture concurrently contracts in its own circular dimensions. Additionally, the mechanism has a natural susceptibility to spring-biasing techniques to further modify its versatility and performance. Applications for the mechanism include numerous support frameworks along with devices and apparatus encompassing the likes of: sheaves and spools; weight-scales and elevators; shock and impact absorbers; throwers and grabbers; interfaces with bellows for valves and pumps; interfaces with fans, props and cutters; interfaces with shafts for functions of braking, clutching, gripping, and a stacking of radial-hinge mechanisms or casting in arrays; in addition to combinations of forms and attachments applicable to the mechanism's multi-functional propensities.